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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/494,837	01/31/2000	Boney Mathew	0153.00084	4020

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EXAMINER

AFTERGUT, JEFF H

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/494,837

Applicant(s)

MATHEW ET AL.

Examiner

Jeff H. Aftergut

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,8,9,14 and 18-26 is/are pending in the application.
- 4a) Of the above claim(s) 1,8,9,14 and 18-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Election/Restrictions

1. Claims 1, 8, 9, 14, 18-21 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 9.

Claim Rejections - 35 USC § 102/103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over E.P. 439,898.

At the outset, it should be pointed out that applicant's earliest afforded effective filing date for claim 22 is 2-23-93 (in Serial Number 08/023,417 the applicant first introduced the use of two dispersions wherein one applied a first dispersion to the tubing, braided over the same, and then applied a final dispersion over the same). E.P. '898 was printed 8-7-91 (more than a year before applicant's afforded effective filing date) and therefore the reference is available under 35 USC 102(b). The reference to E.P. '898 taught that one skilled in the art would have provided a hose with a braided glass fiber thereon. Prior to application of the glass fiber onto the

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tubing, the reference suggested that one skilled in the art would have applied a fluoropolymeric dispersion onto the glass fibers employed in the braid. By performed this step, the finished tubing was provided with a dispersion 20 which completely coated and embedded the glass fiber braid 18 disposed about the extruded tubing 16. While the claims at hand recite two separate dispersion coating operation (one on the tubing followed by braiding and then an additional coating upon the braid) there is no reason to believe that the product produced by this process would have been any different from the product made by E.P. '898. The claims now recite that any gaps from the braided fibers were filled with the dispersion of the second coating, however, it is believed that the coating of the fibers prior to the braiding would have resulted in a finished assembly which had filled gaps between the braided fibers as Figures 2 of E.P. '898 clearly depicted the filling in of any gaps and column 4, lines 39-41 appears to suggest the same (compare Figure 2 of E.P. '898 with Figure 4 of this application, for example). It should be noted that the applicant has the burden to show that the processing as claimed would have produced a materially different product. The Office is not able to produce products by the myriad of processes placed before it and make physical comparisons between the so produced products. While it is believed that the product of '898 anticipates the claimed invention, applicant is advised that the gist of the disclosed invention therein was to ensure that the braided fibers were completely embedded within the polymeric dispersion applied to the same and that the polymeric dispersion not only coated the exterior of the braid but made contact with the extruded hose as well, see column 1, line 50-column 2, line 2. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide additional coatings as

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deemed necessary in order to make sure that the braid was completely immersed within the fluoropolymer using the techniques of E.P. 439898.

With regard to claims 23 and 24, note that the dispersion employed in E.P. '898 was a fluoropolymeric dispersion and thus the product produced would have had the braid embedded within the fluoropolymer. Regarding claim 25, the reference suggested that surfactants would have been included within the dispersion, see column 4, lines 29-30. Regarding claim 26, the dispersion was cured (see for example column 7, lines 12-14). It is not clear whether the inclusion of a curing agent would have produced a materially different finished product or not. Additionally, the use of a curing agent in a fluoropolymer dispersion is taken as conventional in the art.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over E.P. 380,841 in view of any one of Arterburn, Busdiecker, Haren, Mathews, Gray et al, or Brumbach optionally further taken with Green.

E.P. '841 taught that it was known at the time the invention was made to form a fluorocarbon tubular core member and braid upon the same. The reference suggested that it was known to braid a glass fiber material about the fluorocarbon core and subsequent to such action to apply an outer fluorocarbon coating to the assembly. The reference suggested that those

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skilled in the art would have applied a fluorocarbon dispersion onto the braided assembly. The applicant is more specifically referred to the abstract of the reference for example. The claimed product was made by a different process than that of E.P. '841, where the claims require that one initially apply a dispersion to the tube prior to application of the braided layer which was then followed by a second application of a dispersion to the assembly. The applicant has alleged that the use of the "two dip" method produced a materially different product from the single dip operation of E.P. '841. however, it was notoriously well known in the braiding art to apply a coating upon a tube prior to braiding followed by application of a second coating (which was the same as the first coating) in order to ensure complete encapsulation of the braided material within the coating material as evidenced by any one of Arterburn, Busdiecker, Haren, Mathews, Gray et al, or Brumbach.

More specifically, each one of Arterburn (adhesive latex adhesive layers 14, initially applied to the tube 12 prior to braid 16 and second adhesive latex layer 18, see additionally column 2, lines 67-column 3, line 14), Busdiecker (adhesive coating 13 initially applied to tube 10 prior to application of braid 17 followed by the application of adhesive coating 22 which may be of the same type of adhesive as 13), Haren (tube 11 initially coated with adhesive 13A prior to braiding layer 12A which was subsequently coated with another adhesive layer 45A, note that the application of the layer 45A ensured a complete bond in the finished tube), Mathews (two coats of adhesive 15 applied to the tube 10, one prior to braiding and one after braiding the material 14 in order to encapsulate the braid therein see column 5, lines 1-70), Gray et al (adhesive layers 14 and 18 applied to the tube 12 and the braid 16, respectively), or Brumbach (adhesive layer 15 applied to the tube 10 and adhesive layer 17 applied to the braided material 14

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after the braiding operation) suggest that it was known at the time the invention was made to apply two coating of adhesive when manufacturing a braided tube wherein an initial coating was applied to the tube , the coated tube was then braided, and then the assembly was coated again with an adhesive. Such would have ensured a greater bond between the braid and the tube and ensuring complete encapsulation of the braided fibers about the tube. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the techniques of any one of Arterburn, Busdiecker, Haren, Mathews, Gray et al, or Brumbach to make a braided reinforced tube from fluoropolymer of E.P. 380,841 wherein the two coatings of the dispersion (one on the tube prior to braiding and one on the tube after the braiding) would have ensured a good bond between the braid and the tube and completely encapsulated the braided material.

With regard to the various dependent claims, the applicant is advised that the reference to E.P. '841 suggested that it was known to apply a dispersion of fluoropolymer. Additionally the incorporation of curing agent and surfactant in a fluorocarbon dispersion are taken as known and conventional in the art.

While it is believed that the references as set forth above suggested that it was known to apply a dispersion onto the above noted tube prior to the application of the braiding, to further evidence the same the reference to Green is cited. Green taught that it was known at the time the invention was made to apply a dispersion onto the tube prior to braiding about the same when making a reinforced ptfe tube. note that the reference suggested that the processing would have resulted in a strong bond between the tube and the braiding disposed thereon. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the techniques of any one of Arterburn, Busdiecker, Haren, Mathews, Gray et al, or Brumbach

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where one applied two coatings of dispersion in the manufacture of a reinforced fluorocarbon tube wherein one dispersion adhesive coating was applied to the tube prior to braiding as suggested by Green as well as after the braiding operation as suggested by E.P. '841.

It should be noted that with a proper statement that the inventions of this application and Green were commonly owned at the time the inventions were made one may be able to remove Green as a prior art reference under 102(e) as the filing date of this application is now after November of 2000.

Response to Arguments

7. Applicant's arguments filed 1-29-03 have been fully considered but they are not persuasive. The applicant argues that the two coat method produced a different product from that of E.P. '898 as the final product of E.P. '898 would have had gaps therein and did not address whether all gaps were filled in the operation after the braiding process. This has not been found persuasive.

The applicant is advised that as depicted and described in E.P. '898 the fibers of the braid were completely encapsulated within the dispersion of the ptfe. It is agreed that the reference does not expressly state that one skilled in the art would have filled voids or gaps in the braid, but the reason that the reference does not express the same is that there are no gaps between the fibers. The fibers themselves were completely encapsulated within the dispersion when one applied the braiding to the ptfe tubing. The result is the a coating 20 id disbursed throughout the braiding. Compare coating 20 of E.P. '898 and coating 14 of this application. The applicant is additionally advised that the coating of the fibers prior to the braiding resulted in an improved assembly of the braid to the tubing wherein the braiding was better adhered to the tubing as

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discussed by E.P. '898. the applicant has the burden to show that the claimed article of manufacture is materially different from that of E.P. '898 and the evidence provided thus far has fallen short of meeting this burden. Namely, applicant has compared a single dip method to a double dip method and the resulting products, but applicant has failed to make a comparison between a coated fibers which was then braided about a core to the double dip method.

While it is true that the reference to E.P. '898 does not expressly address the "gap" issue of the claims, there is every reason to believe that the coating provided to the fibers prior to the braiding would have filled any gap between the fibers of the braided assembly. This is because the coating applied 20 was a coating which as depicted and described completely encapsulated the fibers of the braid. In order to do the same, all gaps between the fibers would have been understood to have been filled.

The applicant addresses the rejection under 103 and the references to any one of Arterburn, Busdiecker, Haren, Mathews, Gray et al, or Brumbach and states that these references required that the references only applied adhesive coating upon the exterior of the braid because additional braiding was applied to the hose. The applicant is advised that the claims at hand do not exclude the inclusion of an exterior braided layer about the hose which already has a braided layer. Therefore inclusion of multiple coatings to completely embed the braided layer would have been within the purview of the ordinary artisan.

Conclusion


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Martucci '011 suggested that it was known to fill the gaps between the fibers of a braided structure by providing a dispersion to overcoat the same.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 703-308-2069. The examiner can normally be reached on Monday-Friday 6:30-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
February 20, 2003